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IS 11361 (1984): Interconnections Between Video-tape Recorders and Television Receivers for 50 Hz, 625 Lines Systems [LITD 7: Audio, Video and Multimedia Systems and Equipment]



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Indian Standard

SPECIFICATION FOR INTERCONNECTIONS BETWEEN VIDEO-TAPE RECORDERS AND TELEVISION RECEIVERS FOR 50 Hz, 625 LINES SYSTEMS

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Indian Standard

SPECIFICATION FOR INTERCONNECTIONS BETWEEN VIDEO-TAPE RECORDERS AND TELEVISION RECEIVERS FOR 50 Hz, 625 LINES SYSTEMS

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Indian Standard

SPECIFICATION FOR INTERCONNECTIONS BETWEEN VIDEO-TAPE RECORDERS AND TELEVISION RECEIVERS FOR 50 Hz, 625 LINES SYSTEMS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 28 September 1984, after the draft finalized by the Recording Sectional Committee had been approved by the Electronics and Telecommunication Division Council.

0.2 This standard provides for the contact arrangement and contact destination of the circular connectors as well as the cabling used for the multi-wire interconnection (cordset) between video-tape recorder (domestic type) and television receiver.

NOTE 1 — Since this interconnection covers both the television receiver and the video-tape recorder, the connector on the television receiver is also specified.

NOTE 2 — For applications other than those given in this standard reference is made to the other Indian Standard dealing with connectors.

0.2.1 The same cordset can be used for the interconnection of two video-tape recorders for copy purposes.

0.3 While preparing this standard, assistance has been derived from IEC Pub 608 'Interconnections between video-tape recorders and television receivers for 50 Hz, 625 lines systems', issued by the International Electrotechnical Commission.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS: 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard applies to the interconnection between video-tape recorders and television receivers for 625 lines, 50 Hz systems only.

Interconnection between a video-tape recorder and a television monitor may also be covered by this standard.

2. TERMINOLOGY

2.1 For the purpose of this standard, the terms and definitions given in IS : 1885 (Part 48)-1978* shall apply.

3. SAFETY REQUIREMENTS

3.1 The video-tape recorder shall be fed from an isolating transformer, and the video-tape recorder input/output on the television receiver shall be isolated from the mains supply. The overall system shall meet the relevant safety requirements specified in IS : 616-1981†.

4. GENERAL REQUIREMENTS

4.1 The intro-connection between video-tape recorder and television receiver shall in no way interfere with the usual connections (aerial, mains) on the television receiver. The video and audio output signals from the television receiver to the video-tape recorder shall not be affected by the contrast, the brightness, the volume- and the tone-controls of the television receiver.

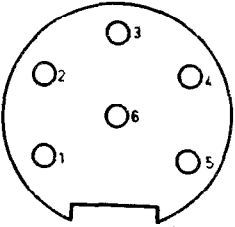
5. CONNECTOR

5.1 Although this connection is suitable up to 6 MHz for video and up to 15 kHz for audio, the connectors as such shall comply with the general requirements given in IS : 9647-1980‡.

*Electrotechnical vocabulary: Part 48 Recording.

†Safety requirements for mains operated electronic and related apparatus for household and similar general use.

‡Specification for general requirements and methods of tests for low frequency of connectors below 3 MHz including DC.

Contact Numbers (as seen on the mating face of the socket connector)			Type Designation	Application
	Pin connector	Free	11361 IS — 01 (see Note 1)	Cordset
	Socket connector	Fixed	11361 IS — 02 (see Note 1)	Video-tape recorder Television receiver

Both for video and audio signals, a single cordset terminated with two male plugs is used.

NOTE 1 — The type designation has been given in accordance with the example given below:

XXXXX IS — YY

where

XXXXX represents the reference number of Indian Standard

YY represents the number allotted to the type of connector.

5.2 Dimensions of the Connector — The dimensions of the above mentioned connectors shall be as given in Fig. 1 and Fig. 2.

NOTE 1 — The television receiver will be switched from normal television reception (signal source to video-tape recorder) into the monitoring mode by means of a + 12 V voltage from the video-tape recorder in the play-back mode.

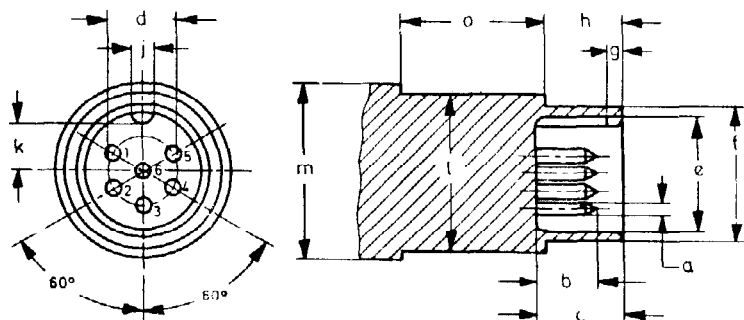
NOTE 2 — The supply voltage from the video-tape recorder is intended for supplying adaptor electronics or other apparatus (for example, r, f, modulator).

NOTE 3 — The sum of the dc currents at pin 1 and pin 5 shall not exceed 200 mA. The output voltages (+ 12 V or 0 V) of the switching and supply voltages are connected to pin 1 and pin 5, respectively, via a series diode to prevent damaging when two video-tape recorders are connected for copy purposes.

NOTE 4 — Chrominance voltage means amplitude of burst.

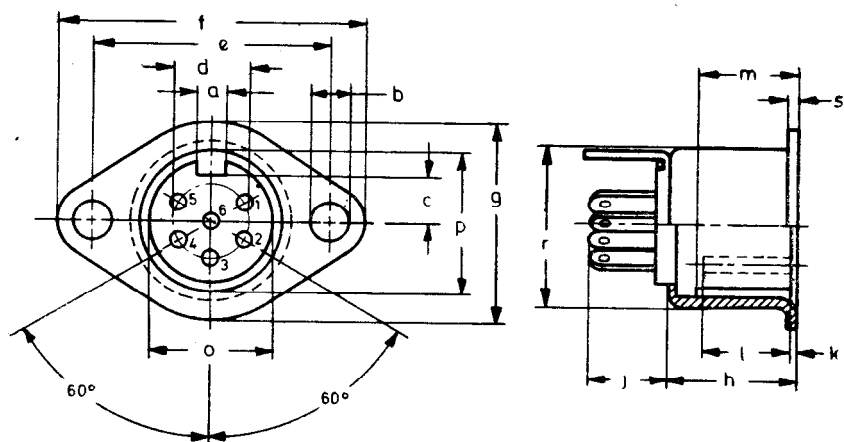
Superimposed dc component — Non useful dc component (signal between ground potential and blanking level) shall be as specified by the manufacturers for terminated and unterminated conditions.

NOTE 5 — CVBS stands for colour (C), video (V), blanking (B) and sync (S).



REFERENCE	mm	
	Max	Min
<i>a</i>	1.5	1.46
<i>b</i>	8.5	7.5
<i>c</i>	9.3	8.8
<i>d</i>	7.05	6.95
<i>e</i>	12.4	12.1
<i>f</i>	13.6	13.1
<i>g</i>	1.0	—
<i>h</i>	9	8.5
<i>j</i>	2.4	2.2
<i>k</i>	4.9	4.55
<i>l</i>	16.5	—
<i>m</i>	18	—
<i>o</i>	—	15

FIG. 1 FREE SIX-PIN CONNECTOR



REFERENCE	mm	
	Max	Min
<i>a</i>	2.7	2.5
<i>b</i>	3.3	3.2
<i>c</i>	4.5	—
<i>d</i>	7.05	6.95
<i>e</i>	22.3	22.1
<i>f</i>	29	—
<i>g</i>	19	—
<i>h</i>	12.6	11.9
<i>j</i>	8	—
<i>k</i>	1	—
<i>l</i>	—	8.7
<i>m</i>	—	9
<i>o</i>	11.3	11.6
<i>p</i>	14	13.8
<i>r</i>	16.2	—
<i>s</i> (metal)	1.3	1.0
<i>s</i> (plastic)	3.4	3.0

FIG. 2 FIXED SIX-SOCKET CONNECTOR

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6. Video-tape Recorder Connection Data

6.1 The connection data is given in Table 1.

TABLE 1 VIDEO-TAPE RECORDER CONNECTION DATA

APPLICATION		TYPE DESIGNATION		CONTACT NUMBERS					
		Pin Connector	Socket Connector	1 (Note 1, Note 3)	2 (Note 4, Note 5)	3	4	5 (Note 2, Note 3)	6
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Video-tape recorder Tele-vision receiver connection	Video-tape recorder in the playback mode	11361 IS : 02		Switching voltage output: output voltage: + 12 V d.c. via series diode	Video output: —output impedance: $75\ \Omega$ —output signal: composite colour signal (CVBS) video positive —output voltage into $75\ \Omega$ load: luminance: $1\ V_{pp} \pm 3\text{dB}$ VBS chrominance PAL: $0.3\ V_{pp-6}\ \text{dB}$ —superimposed dc component into $75\ \Omega$ loads between + 2V and - 2 V	Screening and common return	Audio output: —output impedance: $\leq 1\ k\Omega$ above 20Hz —output signal: audio track 1 —output voltage into $10k\ \Omega$ load: $\leq 0.1\ V\ r.m.s.$ max. 2 V r.m.s.		Additional audio output: —output impedance: $\leq 1k\Omega$ above 20 Hz: —output signal: audio track 2 —output voltage into $10\ k\Omega$ load: $\geq 0.1\ V\ r.m.s.$ max. 2 V r.m.s.
	Video-tape recorder in recording mode			Switching voltage output: output voltage: 0 V via series diode	Video input: —input impedance: $75\ \Omega$ —input signal: composite colour signal (CVBS) video positive —input voltage: luminance: $1\ V_{pp} \pm 3\text{dB}$ VBS chrominance PAL: $0.3\ V_{pp-20}\ \text{dB}$ —superimposed dc component: between + 2V and - 2V		Audio input: —input impedance: $\geq 10\ k\Omega$ above 20 Hz —input signal: audio track 1 —input voltage: $\geq 0.1\ V\ r.m.s.$ max. 2 V r.m.s.		Additional audio output: —input impedance: $\geq 10k\Omega$ above 20 Hz —input signal: audio track 2 —input voltage: $\geq 0.1\ V\ r.m.s.$ max. 2 V r.m.s.
Cordset	—	11361 IS : 01	—	Unscreened wire	$75\ \Omega$ coax cable	Screening	Screened wire	Unscreened wire	Screened wire

*For Notes 1 to 5 see page 5.

7. Television Receiver Connection Data

7.1 The connection data is given in Table 2.

TABLE 2 TELEVISION RECEIVER CONNECTION DATA

APPLICATION		TYPE DESIGNATION		CONTACT NUMBERS					
		Pin Connector	Socket Connector	1 (Note 1, Note 3)	2 (Note 4, Note 5)	3	4	5 (Note 2, Note 3)	6
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Television receiver Video recorder connection	Television receiver as a monitor (recorder in play-back mode)		11361 IS : 02	Switching voltage input: input voltage: + 12 V d.c.	Video input: —input impedance: 75Ω —input signal: composite colour signal (CVBS) video positive —input voltage: luminance: 1 V _{pp} ± 3 dB VBS chrominance PAL: 0.3 V _{pp} -6dB —superimposed d.c. component: between + 2 V and - 2 V		Audio input: —input impedance: $\geq 10\text{ k}\Omega$ above 20 Hz —input signal: audio track 1 —input voltage: $\geq 0.1\text{ V r.m.s.}$ max 2 V r.m.s.		Additional audio input: —input impedance: $\geq 10\text{ k}\Omega$ above 20 Hz —input signal: audio track 2 —input voltage: $\geq 0.1\text{ V r.m.s.}$ max 2 V r.m.s.
	Television receiver as a signal source (recorder in recording mode)			Switching voltage input: input voltage: 0 V	Video output: —output impedance: 75Ω —output signal: composite colour signal (CVBS) video positive —output voltage into 75Ω load: luminance: 1 V _{pp} ± 3 dB VBS chrominance PAL: 0.3 V _{pp} -20dB —superimposed d.c. component into 75Ω load: between + 2 V and - 2 V	Screening and common return	Audio output: —output impedance: $\leq 1\text{ k}\Omega$ above 20 Hz —output signal: audio track 1 —output voltage into $10\text{ k}\Omega$ load: $\geq 0.1\text{ V r.m.s.}$ max 2 V r.m.s.	Supply voltage input: input voltage: + 12 V d.c.	Additional audio output: —output impedance: $\leq 1\text{ k}\Omega$ above 20 Hz —output signal: audio track 2 —output voltage into $10\text{ k}\Omega$ load: $\geq 0.1\text{ V r.m.s.}$ max 2 V r.m.s.

*For Notes 1 to 5 see page 5.